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REMARKS

In accordance with the foregoing, the claim 1 has been amended. Claim 18-25 are added. Claims 4-15 and 17 are cancelled. Therefore, claims 1-3, 16, 18-25 are pending and under reconsideration, which is respectfully requested.

No new matter has been added and accordingly, entry and approval of the claims 1-3, 16, 18-25 are respectfully requested.

STATUS OF THE CLAIMS:

Claims 1-3 and 16 are pending.

Claims 1-3 and 16 are rejected.

Claims 18-25 are added.

Claims 4-15 and 17 are cancelled.

ITEM 4-5: REJECTION OF CLAIM 1-3 and 16 UNDER 35 U.S.C. § 102(b) AS BEING ANTICIPATED BY DINAND et al (U.S. PATENT NO. 5,964,983).

As recited in currently amended claim 1 and new claims 18-19, in applicant's invention, the starting material is quite different from Dinand et al.

Repeating again, in currently amended claim 1, the cellulose being derived from a plant cell wall, wherein if an average degree of polymerization of the cellulose is 400-1300, then an α -cellulose content is 60-90% by weight, and if an average degree of polymerization of the cellulose is greater than 1300, then an α -cellulose content is 60-100% by weight, the cellulose being crystalline having a crystallinity of more than 50%, is claimed;

In new claim 18, the cellulose being derived from cell wall tissue of a plant excluding raw cotton, papilus grass, paper mulberry, paper bush, gampi, beet pulp, and fruit fiber pulp, is claimed; and

In new claim 19, the cellulose being derived from cell wall tissue of a plant, wherein wherein the cellulose has an average degree of polymerization of greater than 400 and an

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α -cellulose content of greater than 60% by weight, is claimed as described for embodiments of the invention (see, e.g. paragraphs [0047], [0048], [0072] of the application specification).

In other words, the applicants claim in claim 18 that the soft cell-derived starting materials such as beet pulp, fruit fiber pulp, etc. are not used for current invention. Paragraph [0048] provides antecedent basis and states that these plants may contain non-cellulose components in a large amount. On the other hand, Dinand et al. disclose that parenchyma such as sugar beet pulp, citrus fruits and the majority of fruits and vegetables are used and the wood is not preferred in their cellulose (see column 2, lines 28-40).

Furthermore, the applicants claim in the claims 1 and 19 that the starting material should include an average degree of polymerization of 400 or higher and an α -cellulose content of 60-100% by weight. Paragraphs [0072]-[0077] of the application provide basis and state that if the starting material does not meet these requirements, 0.5% by weight aqueous solution of the resulting fibrous cellulose comes to show a loss tangent of 1 or higher (see paragraphs [0074] [0075]), also the amount of the component capable of becoming the micro-fibrillated cellulose decreases relatively (see paragraph [0077]). However, Dinand et al. only disclose that the content of cellulose as a starting material is 15% to 30%, but the range of 60-100%. (see column 2, line 56)

We agree with the Examiner that "products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable". However, in current invention, the applicants claim the content of 60-100 wt% of cellulose and an average degree of polymerization of 400 or higher. These are not properties of the starting material, as mentioned in Dinand et al. It is hard to understand that **cellulose** made from different starting materials with a different content and a different average degree of polymerization could have the same or similar properties.

Additionally, in order to make the difference of the starting materials more clear, amended claim 1 further includes the feature that the cellulose of the crystalline has a crystallinity of more than 50%, support for this can be found in paragraph [0050]. In the

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meanwhile, Dinand et al. disclose that the cellulose has a crystallinity of 15-50% (see column 7, lines 4-5).

In addition, the present specification also describes that the physical property (tan δ) of the cellulose of the present invention depends heavily on the differences of the pulps of the starting material (see paragraph [0072]). Thus, since the present invention is quite different from Dinand et al. in the starting material, the cellulose of Dinand et al. is not expected to have the feature "a loss tangent of less than 1" that the present invention requires.

Accordingly, Applicants respectfully submit that an anticipation rejection cannot be based on Dinand et al. patent and allowance of the pending claim 1 as amended, new claims 18-19 and depending claims 2-3, 16, 20-25 are respectfully requested.

ITEM 6-7: REJECTION OF CLAIM 1-3 and 16 UNDER 35 U.S.C. § 103(a) AS BEING UNPATENTABLE OVER DINAND et al. (US Patent No. 5,964,983) IN VIEW OF TURBAK et al. (US PATENT NO. 4,483,743).

As stated in Item 4-5, the present invention of amended claim 1 and new claims 18-19 is not embraced by Dinand et al. patent because of the difference in the starting materials. Besides, the Examiner also mentioned that "The water-dispersible cellulose of the instant claims differs from the crystalline microfibrillated cellulose of the Dinand et al. patent" (see Item 7, fourth paragraph).

In Item 7, paragraph 5, the examiner cited the Turbak et al. patent and argued that "the Turbak et al. patent disclosed substantially stable suspensions of microfibrillated cellulose (see abstract) and teaches that substantially stable suspension can be defined as a suspension in water which upon dilution to 0.5 and upon standing for one hour, maintains at least 60% of its original volume, i.e. contains no more than 40% of clear liquid (see column 3, line 28-32)".

On the other hand, although not claimed in present invention, "30% by weight or more of a component stably suspensible in water" may be obtained by the method of centrifuging the dispersion of 0.1% by weight (see paragraph [0051]-[0053]). On the other

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hand, "the stable suspension of the microfibrillated cellulose maintains at least 60%" of Turbak et al is obtained by the method of leaving the dispersion of 0.5% for one hour. Therefore, there is no relationship between 60% of Turbak et al. patent and 30% of the present invention. It might be thought that the cellulose component in the present invention settles down easily compared with the cellulose component in Turbak et al.

Furthermore, Turbak et al. disclose that the microfibrillated cellulose can be obtained by repeating the passage through the small orifice at the pressure of at least 3000 psi (about 21 MPa) (see abstract and column 2, lines 8-9). Turbak et al. also disclose that the pressure of 5000-8000 psi (about 34-55 MPa) is preferable and indeed Turbak et al. only describe the examples using the pressure of 8000 psi (about 55 MPa) (see column 4, lines 11-12).

In the meanwhile, the present invention describes that the microfibrillated cellulose which corresponds to Turbak et al. and other prior microfibrillated celluloses may not be fine enough because of the lower pressure of 21-56 MPa (see paragraphs [0005]-[0007]), while the present invention disclosed that the cellulose may be treated at the pressure of 60-414 MPa (see paragraphs [0088]-[0092]).

The fine fibrous levels of the microfibrillated celluloses of Turbak et al. are not sufficient, so it is apparent that the cellulose component of Turbak et al. does not have **"30% by weight or more of a component stably suspensible in water"**, which is required by the present invention. The cellulose of the present invention may be more highly micronized than the microfibrillated cellulose of Turbak et al.

Accordingly, even combining the teaching of the Dinand et al patent with the teaching of the Turbak et al patent, any one of ordinary skill in this art would not be motivated at all. Therefore, applicants respectfully submit that an obviousness rejection cannot be based on Dinand et al. in view of Turbak et al and allowance of the pending claim 1 as amended, new claims 18-19 and depended claims 2-3, 16 and 20-25 are respectfully requested.

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ITEM 8: REJECTION OF CLAIM 1-3 and 16 UNDER 35 U.S.C. § 103(a) AS BEING UNPATENTABLE OVER DINAND et al. (US Patent No. 5,964,983) IN VIEW OF KAJITA et al. (JP PUB. NO. 58,013,713 A).

Again, as stated in Item 4-5, the present invention of amended claim 1 and new claims 18-19 is not embraced by Dinand et al. patent because of the difference of starting materials. Besides, the Examiner also mentioned that "The water-dispersible cellulose of the instant claims differs from the crystalline microfibrillated cellulose of the Dinand et al. patent" (see Item 7, fourth paragraph).

In Item 8, paragraph 5, the examiner argued that "the Kajita et al. publication discloses fiber manufactured from cellulose derivative solution in a liquid crystal state, which suggests fibrous cellulose comprising crystalline components as instantly claimed. Kajita et al disclose that the cellulose derivative solution thereof comprises a mechanical loss tangent of 0.06, which is within the range of the loss tangent disclosed in the instant claims of being less than 0.6".

It is hard to agree with the Examiner because the $\tan \delta$ described in the Kajita et al. publication and the present application invention have different meanings. We do not consider that it is proper to compare with them together.

First, the cellulosic derivative fibers in the Kajita et al. publication are dry when measuring $\tan \delta$ (see page 2, upper right column, lines 13-16); while the water-dispersible cellulose in the present invention is measured in an aqueous dispersion having a solid concentration of 0.5% by weight. (see paragraphs [0164]-[0172])

Second, $\tan \delta$ in the present invention means Loss Elastic Modulus/Storage Elastic Modulus (see paragraph [0164]); while in Kajita et al. publication, $\tan \delta$ means Dynamic Loss Tangent (see page 2, upper right column, lines 7-10).

Third, $\tan \delta$ in the current invention may be measured at room temperature, while $\tan \delta$ described in Kajita et al. publication is measured at higher temperature. (see paragraphs [0164]-[0172])

Accordingly, even combining the teaching of the Dinand et al patent with the teaching of the Kajita et al. publication, no one of ordinary skill in this art would be

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motivated to modify the references as suggested by the Examiner. Therefore, applicants respectfully submit that an obviousness rejection cannot be based on Dinand et al. in view of Kajita et al. publication and allowance of the pending claim 1 as amended, new claims 18-19 and depended claims 2-3, 16 and 20-25 are respectfully requested.

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CENTRAL FAX CENTER**ITEM 9-10: REGARDING INFORMATION DISCLOSURE STATEMENT.****FEB 19 2008**

Legible copies and concise explanation of the relevance in connection with cited foreign documents will follow soon.

CONCLUSION

— There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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